

# Normalisation

Solve the following problems

# Raw Data

## Tournament Winners

<u>Tournament</u>	<u>Year</u>	Winner	Winner Date of Birth
Indiana Invitational	1998	Al Fredrickson	21 July 1975
Cleveland Open	1999	Bob Albertson	28 September 1968
Des Moines Masters	1999	Al Fredrickson	21 July 1975
Indiana Invitational	1999	Chip Masterson	14 March 1977

# 1NF

Tournament	Year	Winner Last Name	Winner First Name	Winner D.O.B
Indiana Invitational	1998	Fredrickson	Al	21/07/1975
Cleveland Open	1999	Albertson	Bob	28/09/1968
Des Moines Masters	1999	Fredrickson	Al	21/07/1975
Indiana Invitational	1999	Masterson	Chip	14/03/1977

# 2NF

Player Code	Last Name	First Name	Tournament	Year
1	Masterson	Chip	Indiana Invitational	1999
2	Fredrickson	Al	Indiana Invitational	1998
3	Albertson	Bob	Cleveland Open	1999
4	Fredrickson	Al	De Moines Masters	1999

Player Code	Last Name	First Name	Date of Birth
1	Chip	Masterson	14/03/1977
2	Al	Fredrickson	21/07/1975
3	Bob	Albertson	28/09/1968

# 3NF

Tournament Code	Tournament
1	Indiana Invitational
2	Cleveland Open
3	Des Moines Masters

Player Code	Tournament Code	Year
1	1	1999
2	1	1998
2	3	1999
3	2	1999

Player Code	Last Name	First Name	D.O.B
1	Masterson	Chip	14/03/1977
2	Fredrickson	Al	21/07/1975
3	Albertson	Bob	28/09/1968

# Problem 2

Normalise this data

## Bounces Online Books

Name	Address	Book purchased	Item Cost	Date of purchase	Quantity	Total Cost
Tom Jones	56 Latrobe Street,Melbourne, VIC 3000	The Girl in the Hornet's Nest	\$24.95	08/03/2011	1	\$24.95
Tom Jones	65 Latrobe Street,Melbourne, VIC 3000	Curiosity Killed the Cat	\$14.95	08/03/2011	1	\$14.95
Mary Small	236 Smith Street, Collingwood VIC 3002	Lord of the Necklaces	\$18.95	10/03/2011	2	\$37.90
Mary Small	237 Smith Street, Collingwood VIC 3002	The Girl in the Hornet's Nest	\$24.95	10/03/2011	1	\$24.95
Fred Blogs	45 High Street, Sydney, NSW, 2000	The Hobby	\$13.95	12/03/2011	2	\$27.90
Fred Blogs	45 High Street, Sydney, NSW, 2000	Lord of the Necklaces	\$24.95	12/03/2011	1	\$24.95
Fred Blogs	45 High Street, Newcastle, NSW, 2000	The Girl in the Hornet's Nest	\$24.95	12/03/2011	1	\$24.95

# 1NF

## Bounces Online Books

Last Name	First Name	Address	Suburb	State	Postcode	Book Purchased	Item Cost	Date of Purchase	Quantity	Total Cost
Jones	Tom	56 Latrobe Street	Melbourne	VIC	3000	The Girl In The Hornet's Nest	\$24.95	08/03/2011	1	\$24.95
Jones	Tom	65 Latrobe Street	Melbourne	VIC	3000	Curiosity Killed The Cat	\$14.95	08/03/2011	1	\$14.95
Small	Mary	236 Smith Street	Collingwood	VIC	3002	Lord Of The Necklaces	\$18.95	10/03/2011	2	\$37.90
Small	Mary	236 Smith Street	Collingwood	VIC	3002	The Girl In The Hornet's Nest	\$24.95	10/03/2011	1	\$24.95
Blogs	Fred	45 High Street	Sydney	NSW	2000	The Hobby	\$13.95	12/03/2011	2	\$27.90
Blogs	Fred	45 High Street	Sydney	NSW	2000	Lord Of The Necklaces	\$24.95	12/03/2011	1	\$24.95
Blogs	Fred	45 High Street	Sydney	NSW	2000	The Girl In The Hornet's Nest	\$24.95	12/03/2011	1	\$24.95

# 2NF

**Customer Table**

Customer Code	Last Name	First Name	Address	Suburb	State	Postcode
152	Jones	Tom	56 Latrobe Street	Melbourne	VIC	3000
384	Small	Mary	236 Smith Street	Collingwood	VIC	3002
762	Blogs	Fred	45 High Street	Sydney	NSW	2000

**Books Purchased Table**

Customer Code	Book Purchased	Item Cost	Date of Purchase	Quantity	Total Cost
152	The Girl In The Hornet's Nest	\$24.95	08/08/2011	1	\$24.95
152	Curiosity Killed The Cat	\$14.95	08/08/2011	1	\$14.95
384	Lord Of The Necklaces	\$18.95	10/08/2011	2	\$37.90
384	The Girl In The Hornet's Nest	\$24.95	10/08/2011	1	\$24.95
762	The Hobby	\$13.95	12/08/2011	2	\$27.90
762	Lord Of The Necklaces	\$24.95	12/08/2011	1	\$24.95
762	The Girl In The Hornet's Nest	\$24.95	12/08/2011	1	\$24.95



# 3NF

## Customer Table

Customer Code	Last Name	First Name	Address	Suburb	State	Postcode
152	Jones	Tom	56 Latrobe Street	Melbourne	VIC	3000
384	Small	Mary	236 Smith Street	Collingwood	VIC	3002
762	Blogs	Fred	45 High Street	Sydney	NSW	2000

## Books Table

Book Code	Book Name	Genre	Total Cost
1	The Girl In The Hornet's Nest	Murder Mystery	\$24.95
2	Curiosity Killed The Cat	Romance	\$14.95
3	Lord Of The Necklaces	Fantasy	\$18.95
4	The Hobby	Fantasy	\$13.95

## Purchases Table

Customer Code	Book Code	Date of Purchase	Quantity	Total
152	1	08/03/2011	1	\$24.95
152	2	08/03/2011	1	\$14.95
384	3	10/03/2011	2	\$37.90
384	1	10/03/2011	1	\$24.95
762	4	12/03/2011	2	\$27.95
762	3	12/03/2011	1	\$28.95
762	1	12/03/2011	1	\$24.95